



A.D. 1856 : N° 2243.

S P E C I F I C A T I O N

OF

THOMAS HOLMES
AND
THOMAS ASPINALL.

DIMINISHING THE PRODUCTION AND
EFFECTING THE COMBUSTION OF SMOKE.

L O N D O N :

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1857.



A.D. 1856 N° 2243.

Diminishing the Production and Effecting the Combustion of Smoke.

LETTERS PATENT to Thomas Holmes, of Pendleton, in the County of Lancaster, Bleacher, and Thomas Aspinall, of Pendleton aforesaid, Watchman, for the Invention of “**IMPROVEMENTS FOR PREVENTING OR DIMINISHING THE PRODUCTION OF SMOKE IN FIRE-PLACES AND FURNACES, AND FOR EFFECTING ITS COMBUSTION.**”

Sealed the 16th December 1856, and dated the 25th September 1856.

PROVISIONAL SPECIFICATION left by the said Thomas Holmes and Thomas Aspinall at the Office of the Commissioners of Patents, with their Petition, on the 25th September 1856.

We, THOMAS HOLMES, of Pendleton, in the County of Lancaster, Bleacher,
5 and THOMAS ASPINALL, of Pendleton aforesaid, Watchman, do hereby declare the nature of the said Invention for “**IMPROVEMENTS FOR PREVENTING OR DIMINISHING THE PRODUCTION OF SMOKE IN FIRE-PLACES AND FURNACES, AND FOR EFFECTING ITS COMBUSTION,**” to be as follows:—

Our Invention consists in applying lime, or substances containing lime
10 (either with or without the addition thereto of soda ash or other alkaline substance) to the fuel employed in the fire-places or furnaces, the smoke whereof it is desired to prevent or consume. The ingredients used may be mixed with the coal before it is thrown upon the fire, or may be thrown over the coal immediately after the coal is charged on the fire.

Holmes & Aspinall's Improvements for Preventing the Production of Smoke, &c.

SPECIFICATION in pursuance of the conditions of the Letters Patent, filed by the said Thomas Holmes and Thomas Aspinall in the Great Seal Patent Office on the 17th March 1857.

TO ALL TO WHOM THESE PRESENTS SHALL COME, we, THOMAS HOLMES, of Pendleton, in the County of Lancaster, Bleacher, and THOMAS ASPINALL, of Pendleton aforesaid, Watchman, send greeting. 5

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Twenty-fifth day of September, in the year of our Lord One thousand eight hundred and fifty-six, in the twentieth year of Her reign, did, for Herself, Her heirs and successors, give and grant unto us, the said Thomas Holmes and Thomas Aspinall, Her special licence that we, the said Thomas Holmes and Thomas Aspinall, our executors, administrators, and assigns, or such others as we, the said Thomas Holmes and Thomas Aspinall, our executors, administrators, and assigns, should at any time agree with, and no others, from time to time and at all times thereafter during the term therein expressed, should and lawfully might make, use, exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for “**IMPROVEMENTS FOR PREVENTING OR DIMINISHING THE PRODUCTION OF SMOKE IN FIRE-PLACES AND FURNACES, AND FOR EFFECTING ITS COMBUSTION,**” upon the condition (amongst others) that we, the said Thomas Holmes and Thomas Aspinall, our executors or administrators, by an instrument in writing under our, or their, or one of their hands and seals, should particularly describe and ascertain the nature of the said Invention, and in what manner the same was to be performed, and cause the same to be filed in the Great Seal Patent Office within six calendar months next and immediately after the date of the said Letters Patent. 15 20 25

NOW KNOW YE, that we, the said Thomas Holmes and Thomas Aspinall, do hereby declare the nature of our said Invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement, that is to say:— 30

Our Invention consists in the application of lime, or of substances containing lime, either alone or with the addition of soda ash or other alkaline substance, to the fuel employed in fire-places or furnaces, whereby the smoke from such fire-places or furnaces is more or less prevented or consumed.

Now, although we do not confine ourselves to the use of any of the above-named substances, nor of any mixture of two or more of them, yet we prefer to use either quicklime alone or a mixture of quicklime with one-twentieth 35

Holmes & Aspinall's Improvements for Preventing the Production of Smoke, &c.

part of soda ash. The quicklime known as bleachers' refuse lime answers the purpose very well. We have found quicklime or mixture of quicklime and soda ash added to the fuel, in the proportion of seven pounds to each hundred-weight of the fuel put into the furnace, to effect the desired object. Which-
5 soever of the above-mentioned ingredients or mixtures be used, it may be either mixed with the fuel before the latter is put upon the fire, or it may be thrown over the fuel immediately after the fuel is charged on the furnace. We prefer, however, to mix about one-half of the proper proportion of the quicklime or mixture of quicklime and soda ash with the fuel before its
10 introduction into the furnace, and then to throw and distribute the remaining half proportion over the surface of the fuel immediately after its introduction into the furnace.

Having thus described the nature of our Invention, and the best means known to us for performing the same, we hereby declare that we do not confine
15 ourselves to the use of the proportions and mixtures above recommended, and which we find to be most suitable for the bituminous coals generally used in furnaces and fire-places; but we claim as our Invention the use of lime or substances containing lime (either with or without the addition thereto of soda ash or other alkaline substance) for the prevention of smoke in furnaces and
20 fire-places, by the admixture of such substance or substances as aforesaid in any proportions with the fuel used in the said furnaces and fire-places.

In witness whereof, we, the said Thomas Holmes and Thomas Aspinall, have hereunto set our hands and seals, this Fourteenth day of March, One thousand eight hundred and fifty-seven.

25

THOMAS HOLMES. (L.S.)

THOMAS ASPINALL. (L.S.)

LONDON:

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